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UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE

✓

Management Plans
Lassen
Forest Management Record.

March 21. 1925.

REPORT ON CRUISE OF CUT-OVER AREA
LASSEN LUMBER & BOX COMPANY'S SALE
11-16-17

SEASON 1924

TRANSFERRED

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Management Plans
Forest Management Record
L.L.& B.Co. Sale 11-16-17

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Season 1924

A E Wieslander
A. E. WIESLANDER
Forest Examiner

Approved:

W G Durbin
5-5-25
W. G. DURBIN
Forest Supervisor

5-5-25
(Date)

Copy sent Forester
Copy in CR2

Introduction.

It is believed that a report on the cut-over cruise made on this sale during 1924 will be of interest because a somewhat different method of cruising was employed for the first time and because the area cruised is representative of the modified marking practice in effect since 1921 in contrast to the area previously cruised and reported* on which is representative of the original marking.

Method of Cruise.

The standard 10% strip method of timber surveys using a two-man crew was employed as in previous cruises. The unit of estimating was the forty, and estimates were recorded on a specially devised form. (See pages 8 and 9). At the 5 and 15 chain points on each of the strips through a forty a count of the reproduction in the classes 0-6 feet in height and over 6 feet to 3 inches in D.B.H., was made on 1/10 acre circular plots thus securing a 1% estimate. In addition to the count a map was made showing fully and under stocked portions of the plot. (See pages 10 and 11 for sample reproduction plot map sheet).

Courses were run with the Forest Service Standard Compass and distances measured with a 2½ chain tape. A Biltmore stick was used for diameters and heights. To lay out the circular plots a 50 foot tape was used which was centered on the compass staff held in place by the compassman. The estimator held the tape at the 37.2 foot mark and circled around from the initial point counting the trees in convenient sectors by means of a tally register and also placing temporary marks such as a piece of red cloth or a footmark in the soil to indicate the outer limits of the plot for the purpose of mapping. The mapper then stood in turn at each of the eight points of the compass at the outer limit of the plot and sketched to scale the fully stocked areas and indicated individual trees in their proper location.

Trees 12 inches and over in D.B.H. were tallied in number of 16 foot logs to an eight inch top. The standard District 5 volume tables for yellow pine, Site III were used in computing the estimates.

On this sale a two-man crew can, on the average, run two miles of strip a day using this method.

*Report of initial cruise of cut-over land
Lassen Lumber & Box Company Sale 11-16-17
By A. E. Wieslander under date Dec.5,1921.

Area Cruised.

The area cruised consists of 1184 acres of pure yellow pine type located in Secs. 5 and 6, T. 29 N., R. 9 E.,and secs. 29 and 32, T. 30 N., R. 9 E. (See map page 7). Mature heights range from 120 to 125 feet, thus indicating the upper limits of Site IV. About 95% of the area was logged by horse drawn big wheels. The logs on the remaining 5% of the area were skidded to the railroad by means of a McGiffert loader. The actual cut cannot be segregated for the area cruised but because of the uniformity of the stand in the locality, the average cut of 14,360 feet B.M. per acre secured from secs. 29 and 32 should be a very close approximation. There could hardly be selected an area of similar size more representative of the type, stand, and site predominating on the sale and of the marking practice and logging methods that have prevailed since 1921.

Inventory of Stand Left.

1. Reproduction Conditions.

As a yardstick for measuring distribution and stocking, it was assumed that an acre supporting 1000 evenly distributed trees 0-3" in D.B.H. was fully stocked. The term stocking implies area covered because all trees 4 inches and over are considered as non-existant in connection with stocking of reproduction. This figure was taken because it is a convenient one to use and because it is about equivalent to a customary spacing in planting, (6.5 feet x 6.5 feet), considered necessary to secure adequate stocking. It matters little whether 800, 1200, or 1000 is used as long as we have some tangible and understood unit to compare our stocking with.

Tables 1-A and 1-B, (page 12), summarize distribution and stocking on this basis. Table 1-A brings out that most of the reproduction occurs in more or less overstocked groups covering about 1/4 of the total area and that on the other 3/4 of the area the reproduction is very scanty. Table 1-B shows that only a little more than 1/3 of the area is adequately covered with reproduction.

Table 1-C, (page 12), shows the proportion of the reproduction in two size classes and the average height of each size class. On the basis of height data for the same site given in Show's* "Yield Capacities of Pure Yellow Pine Type Under East Side Conditions", the table indicates that 93% of the reproduction averages about 12-15 years in age and that 7% is about 26 years old.

*"Yield Capacities of Pure Yellow Pine Type Under East Side Conditions" by S. B. Show, under date of March 1, 1920.

That reproduction conditions for the area cruised are probably representative of nearly the entire area cut-over to date is indicated by comparing the number of trees per acre in Table 1-C with the number of trees on an area in secs. 8, 17 and 18, cruised in 1920. In the size classes 0-6' and 6'-3" the former area has 661 and 53 trees per acre respectively while the latter has 855 and 53.

The sample plot information brings out clearly that the advance reproduction left on the sale area is entirely inadequate and that seeding in must be depended upon to secure any measure of satisfactory stocking. This means that sufficient seed trees must be left. It also raises the question as to how much of the original reproduction was lost in logging and slash disposal and as to the extent the stocking on the cut-over area can be increased by holding the amount swamped out in logging to a minimum and by better placing of slash piles and more careful burning. It is planned to conduct a study to find out what can be done in these respects.

2. The Pole Stand.

Trees 4 to 11 inches in D.B.H. are considered poles. Table No. 2, (page 13), shows that, while the number of poles per acre is small, they are in excellent condition from a health standpoint. Mistletoe infection is negligible and there is very little logging damage. The last column indicates that only 1.4% of the poles are seriously defective.

Excellent distribution of the poles is indicated by Table No. 3, (page 14). Barring losses by accident, about 85% of the trees will survive until the second cut and a rapid growth can be expected because such a large per cent of these will grow at the rate of isolated and dominant trees.

3. The Merchantable Stand.

Table No. 2, (page 13), pictures the number, size, and condition of the trees left. Logging damage is small as one would expect to find in such open stands with the method of logging employed. Stem injuries are from three sources:-falling, bumping of big wheels against the trees, and log skidding by the jammer causing basal scars. About 5% of the area cruised was logged with the jammer and 20% of the stem injuries on the entire area are from this source.

With the exception of one tree which should have been marked for cutting, the trees on the 118.4 acres of strip tallied were free from mistletoe.

The health of the stand as a whole is excellent.

Excellent distribution is indicated by Table No. 3, (page 14). As better than 90% of the trees will grow at the rate of isolated and dominant trees, comparatively rapid growth can be expected.

This table will be useful in predicting growth when growth tables for each of the several crown classes are available.

Character of Marking.

Table No. 4, (page 15), was constructed for the purpose of judging the character of marking. It shows that marking has practically kept the reserved stand free from mistletoe and that no defective trees were left except for occasional trees in the smaller diameter classes where it is doubtful whether any merchantable logs would have been secured by their cutting. The classification into the probable crown classes at the end of 70 years shows that the stand has been well thinned. The predominating number of isolated trees in the larger diameter classes indicates that seed trees have been well selected as to location.

That seed trees are also well selected from a growth standpoint, is indicated by Table No. 5, (page 16), based on increment borings taken for an average run of trees left in logging, not on the area cruised, but on an area where the stand and marking practice are essentially the same.

A comparison between the stand left in the original and modified marking is made in Table No. 6, (page 17).

It shows that the chief difference in marking is in the number of trees left over 30 inches in D.B.H.

It also indicates that smaller diameter classes are not as well represented in the virgin stands in the areas we are now marking as in the areas marked under the original marking system. This has been found to be the case on all of the area marked under the modified system that has been cruised to date, indicating that the change in marking was very desirable and timely.

Damage in Logging.

Damage in logging to the trees left on the area after logging has been completed, is summarized in Table No. 7, (page 18). This has been previously discussed in connection with the condition of the stand with reference to Table No. 2.

The cut-over cruise can only show the damage to the trees left. The number of trees destroyed in logging should be determined by a separate study. On this sale, because of the open stand and method of logging employed, the number of reserved merchantable trees destroyed in logging is negligible but in the pole stand and particularly in the reproduction there is considerable loss in swamping out wheel roads.

Damage in Slash Burning.

Damage resulting from slash disposal outside of the actual area covered by the piles is shown in Table No. 8, (page 18), which is probably indicative of the normal damage to be expected where piling is done in conjunction with swamping, assuming that careful burning is done under favorable burning conditions.

This next season brush piling will not be done until the logs have been taken out. This will mean better located and better sized piles from the standpoint of burning, so future cruises on areas where such piling is done should show a considerably lower percentage of loss.

Losses Subsequent to Logging and Slash Disposal.

While a short period of a year or two cannot give any estimate of the amount of loss in a stand during a cutting cycle period, it can give an idea as to the sources of loss and their relative importance.

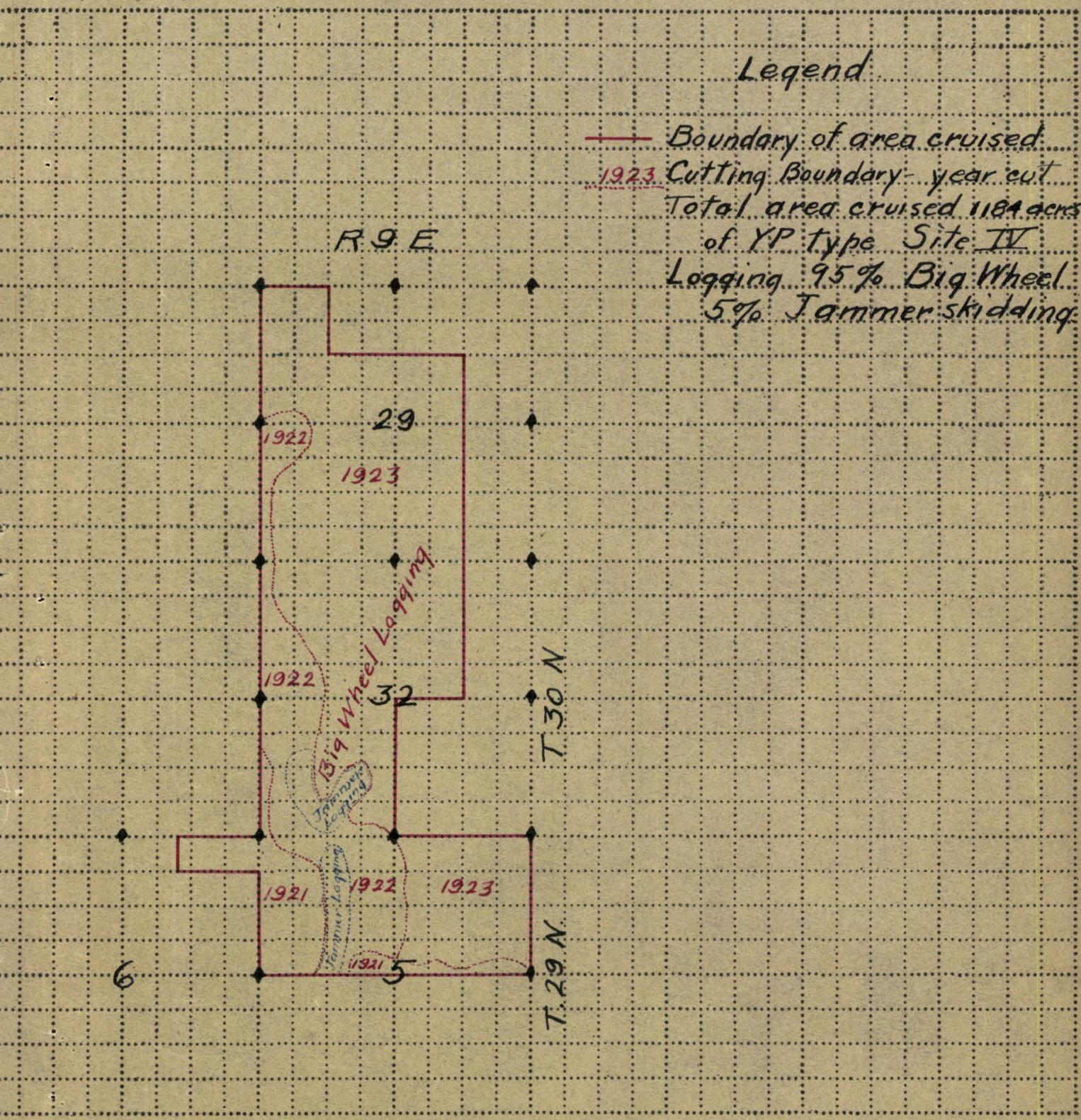
Table No. 9, (page 19), indicates that lightning, insects, and wind will be the chief causes of loss in the reserved stand. Experience has shown that the greatest amount of windfall occurs during the first 5 year period after logging and that for subsequent 5 year periods the loss from this source diminishes decidedly. With respect to lightning losses, each succeeding 5 year period cannot be expected to show diminished losses. Barring possibly insects, lightning will probably be the greatest source of loss to the reserved stand as this sale is within a lightning belt.

APPENDIX

UNITED STATES DEPARTMENT OF AGRICULTURE—FOREST SERVICE

_____ Land District. Mag. Declin. _____ Area 1184 Acres

_____, _____ T. _____ R. _____ Mer. Scale 2 inches = 1 mile
(Case designation.) (Subdivision and section.)



Field work by _____, Date _____, Platted by _____

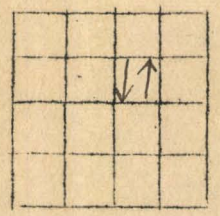
Remarks: _____

_____ Approved _____, 19____, _____
(Approving officer.)

Form 878b
(Revised April, 1916)

8—3406

ESTIMATE SHEET FORM



T. 30 N L.L.P.B.Co 11-16-17 (Sale) DWK Compassman

R. 9E Species YP CEW Estimator

S. 32 Site IV 10-15-24 Date

40. SW NE Timbered Acres on 40 = 40 / Timbered Acres on Strip = 4

DBH	S & H	S.I.	B.T.	FK	Cf. M	Cf. B	Dis	Def P	Def M	Wb.	DBH	X	D	C	I	S
4	//// //	/									4	///	////	/		
6	///										6	/	//			
8	///							/			8	/	//			
10											10					
T	13	/						/			T	5	8	/		
12											12					
14	///	/									14		//	/		
16	2										16		2			
S.T	N 4	/									S.T.	N	3	/		
18	1 22 33	2									18	3	1 223			
20	23										20	2	3			
22	4	3									22	3 4				
S.T.	N 8	2									S.T.	5	6			
24	4	4									24	4	4			
26	4										26	4				
28	4										28	4				
S.T.	N 3	/									S.T.	3	/			
30											30					
32	4										32	4				
34											34					
36	6										36	6				
38											38					
40											40					
over	N 2											2				
S.T.	N 2										S.T.	2				
T	N 17	3	/								T	N 10	9	/		

Lightning Killed YP 32-5

Bug killed YP 28-5 (DBH No Logs)

Windfall YP 18-3

Stem Injuries all caused by Jammer Logging

100% Tally

Plot Size No.	#1		#2		#3		#4	
	0-6'	6'-3"	0-6'	6'-3"	0-6'	6'-3"	0-6'	6'-3"
No.	163	4	1	—	39	4	180	13
Av. Ht	2'	7	1	—	3'	7'	4'	8
No. FK	—	—	—	—	2	—	4	—

EXPLANATION OF ESTIMATE SHEET FORM

1. Health Classification.

S & H - Sound and healthy.
S. I. - Stem injuries - basal scars and other injuries resulting from logging.
B. T. - Broken tops - caused by logging.
F. K. - Fire killed - trees killed in brush burning.
Cf.M. - Catfaced M. - trees with basal scars not serious enough to warrant marking for cutting.
Cf.B. - Catfaced B. - trees with basal fire scars resulting from brush burning.
Wb. - Windbreak tree.
Dis. - Diseased - trees with infectious disease, such as mistletoe, conks, etc.
Def.P.- Defective P. - serious porcupine injuries to tops.
Def.M.- Defective M. - any defective tree not included under "diseased" or "porcupine" which should have been marked for cutting.
Lightning, Bug Killed, and Windfalls - occur infrequently so are not given columns but are recorded on the lower left corner of the tally sheet. 100% cruise of these is secured.

2. Crown Classification.

X - Isolated
D - Dominant
C - Codominant
I - Intermediate
S - Suppressed

Each living tree tallied under the health classification is again tallied under the crown classification unless its condition precludes the possibility of any appreciable increment. The probable position of the tree, at the end of a 70 year cutting cycle and not its present position, is the basis used in classification.

Reproduction Tally.

The lower right corner of the sheet provides for entering the reproduction count on the four plots taken on each forty. The number and average height under the 0-6 feet and over 6 feet to 3" D.B.H. columns, is self explanatory. The trees killed by brush burning outside of the actual area occupied by the brush piles are entered as "No. F.K."

FORM 493 (Revised 1914)

Reproduction Plot Sheet

COMPASSMAN.....

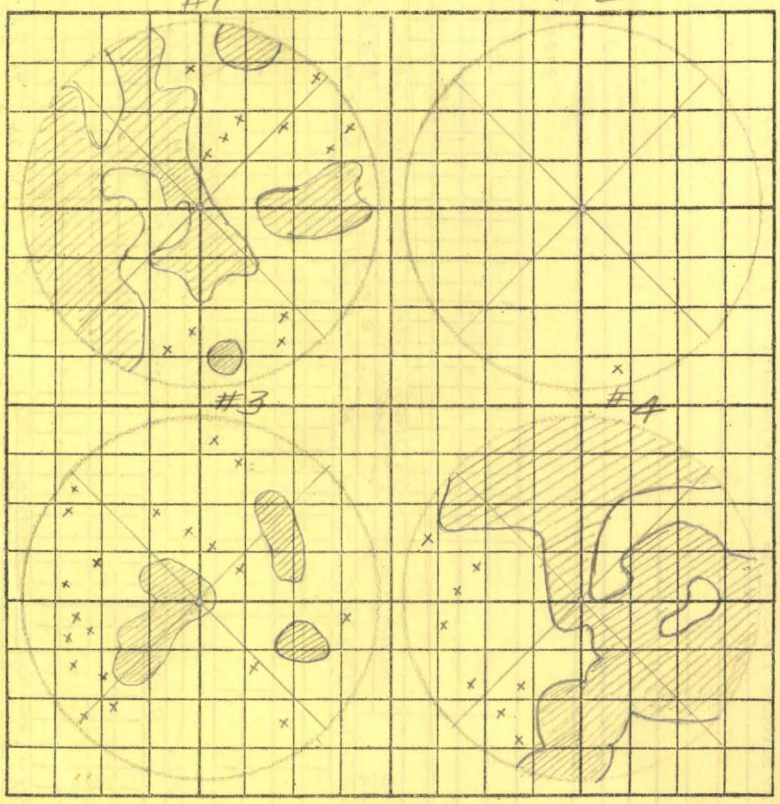
T. 30 N. R. 9 E. SEC. 32 MER..... DATE..... 191....

Forty SWNE Scale 1 inch = 40 ft.
0-3° in DBH

1000 or more trees per acre

x Individual trees

Total area plot = 0.1 acre.



BAROMETER READINGS

1.
2.

Summary of Plots

3 Plot No.	Fully stocked		Understocked		Total	Stocking
4	No.	Acres	No.	Acres	Acres	%
5 #1	155	.049	12	.051	.061	61
6 #2	–	–	1	.100	.001	1
7 #3	23	.003	20	.092	.028	28
8 #4	305	.063	8	.037	.071	71
9 Total	483	.120	41	.281	.161	40

10.

CAMP A.M.

CAMP P.M.

EXPLANATION OF REPRODUCTION PLOT MAP SHEET

Fully stocked area is that portion of the plot where the number and distribution of trees 0-3" in D.B.H. is equivalent to any density not less than 1000 evenly distributed trees. The balance of the area on the plot is termed "under stocked".

In the summary the area values were secured by use of a planimeter, but it is believed that results accurate enough for the purpose can be quickly obtained by inspection, knowing that each of the eight sectors is equivalent to 12½% of the area and that each 10 foot square is equivalent to .0023 acres.

The number of trees in "under stocked area" is the actual number of individual trees shown on the map. The difference between this number and the total count recorded on the Estimate Sheet is the number under the "fully stocked area".

On the basis of the assumed definition of a fully stocked stand, each individual tree stocks .001 acres so the total area stocked equals the stocked area plus the number of individual trees times .001, which in the case of Plot #1 on the sample map sheet is .049, plus .012 equal .061 acres or 61% of the area of the plot.

TABLES NO. 1-A, 1-B, 1-C. REPRODUCTION CONDITIONS.

YELLOW PINE SITE IV. BASIS 117 0.1 ACRE PLOTS.

TABLE NO. 1-A. DISTRIBUTION OF REPRODUCTION

AREA SEGREGATION	NUMBER OF TREES 0-3" D.B.H.		AREA COVERED	
	TOTAL	PER ACRE	ACRES	PER CENT
*Fully Stocked	7150	2399	2.980	26
Under Stocked	1209	139	8.720	74
Total Area	8359	714	11.700	100

TABLE NO. 1-B. DENSITY OF STOCKING

AREA SEGREGATION	NUMBER OF TREES 0-3" D.B.H.		AREA COVERED	
	TOTAL	PER ACRE	ACRES	PER CENT
				(Density of Stocking)
Stocked	8359	1995	4.189	36
Not Stocked	0	0	7.511	64
Total Area	8359	714	11.700	100

TABLE NO. 1-C. SIZE OF REPRODUCTION

SIZE CLASS	NUMBER OF TREES PER ACRE		AVERAGE HEIGHT IN FEET
	NO.	PER CENT	
0-6' High	661	93	2.9
Over 6' to 3" D.B.H.	53	7	8.4
Total (0-3" D.B.H.)	714	100	3.3

*Definition of Stocking. An acre supporting at least 1000 evenly distributing trees 0-3" D.B.H., is considered to be fully stocked.

TABLE NO. 2, HEALTH OF RESERVED STAND

YELLOW PINE SITE IV. BASIS 118.4 ACRES OF STRIP

NUMBER OF TREES PER ACRE

D.B.H.	S & H	S. I. (LOGGING)	B. T. (LOGGING)	Cf. M	DIS.	DEF. P	DEF. M	TOTAL STAND	TREES ON WHICH NO INCREMENT CAN BE EXPECTED
4	5.13	.02	---	---	---	.03	---	5.18	.03
6	3.56	.01	.01	---	.01	.06	.01	3.66	.08
8	1.97	.03	.03	---	---	.03	---	2.06	.03
10	.99	---	.03	---	---	.02	---	1.04	.03
Total	11.65	.06	.07		.01	.14	.01	11.94	.17
Poles	97.5%	0.5%	0.6%	0.0%	0.1%	1.2%	0.1%	100.0%	1.4%
12	.98	.03	.02	.01	---	.02	.01	1.07	.06
14	.85	.01	.03	---	---	.01	.01	.91	.03
16	.66	.02	.01	.03	---	.04	---	.76	.05
18	.65	.03	.01	.03	---	.01	.01	.74	.03
20	.51	---	---	.01	---	.01	---	.53	.01
22	.43	.02	---	---	---	.01	---	.46	.01
24	.51	.01	---	.01	---	.--	---	.53	.01
26	.36	---	---	.02	.01	--	---	.39	.01
28	.33	.01	---	---	---	--	---	.34	---
30	.16	.01	---	.01	---	--	---	.18	---
32	.21	---	---	.01	---	--	---	.22	---
34	.14	---	---	---	---	--	---	.14	---
36	.08	---	---	---	---	--	---	.08	---
38	.03	---	---	---	---	--	---	.03	---
40	.02	---	---	---	---	--	---	.02	---
Over	.03	---	---	---	---	--	---	.03	---
Total Merch. Timber	5.95 92.5%	.14 2.2%	.07 1.1	.13 2.0	.01 0.2	.10 1.5%	.03 0.5%	6.43 100%	.21 3.3%

****

S & H - Sound and healthy.
S. I. - Stem Injuries.
B. T. - Broken tops.
Cf.M. - Catfaced M.
Dis. - Diseased.
Def.P - Defective P.
Def.M - Defective M.

TABLE NO. 3. PROBABLE CROWN CLASSIFICATION OF RESERVED STAND AT THE TIME OF NEXT CUT (70 YEARS).

SPECIES YELLOW PINE. BASIS 118.4 ACRES
SITE IV. MATURE HTS. 120-125'. OF STRIP

D.B.H.	NUMBER OF TREES PER ACRE					TOTAL
	ISOLATED	DOMINANT	CO-DOMINANT	INTERMEDIATE	SUPPRESSED	
4	.24	2.79	1.16	.67	.29	5.15
6	.42	2.20	.54	.36	.06	3.58
8	.32	1.22	.35	.09	.05	2.03
10	.20	.46	.18	.14	.03	1.01
Total	1.18	6.67	2.23	1.26	.43	11.77
Poles	10.1%	56.7%	18.9%	10.7%	3.6%	100%
12	.17	.68	.10	.03	.03	1.01
14	.18	.61	.07	.02	----	.88
16	.20	.42	.09	----	----	.71
18	.20	.47	.03	.01	----	.71
20	.14	.36	.02	----	----	.52
22	.17	.27	---	----	.01	.45
24	.24	.27	.01	----	----	.52
26	.19	.19	---	----	----	.38
28	.20	.14	---	----	----	.34
30	.09	.09	---	----	----	.18
32	.17	.05	---	----	----	.22
34	.12	.02	---	----	----	.14
36	.06	.02	---	----	----	.08
38	.03	---	---	----	----	.03
40	.02	---	---	----	----	.02
Over	.03	---	---	----	----	.03
TOTAL	2.21	3.59	0.32	.06	.04	6.22
	35.6%	57.7%	5.1%	1.0%	0.6%	100%

TABLE NO. 4. CHARACTER OF MARKING.

SPECIES YELLOW PINE. BASIS 118.4 ACRES OF STRIP
SITE IV. MATURE HTS. 120-125'.

D.B.H. INCHES	DIS. %	DEF. %	TOTAL STAND LEFT NO. OF TREES PER ACRE	ISO-LATED %	DOMINANT %	CO-DOMINANT %	INTERMEDIATE %	SUPPRESSED %	TOTAL° NO. OF TREES PER ACRE
12	--	0.9	1.07	16.7	67.5	10.0	3.3	2.5	1.01
14	--	1.1	.91	13.5	76.1	8.3	2.1	---	.88
16	--	---	.76	28.6	59.5	11.9	---	---	.71
18	--	1.3	.74	27.4	66.6	4.8	1.2	---	.71
20	--	---	.53	27.4	69.4	3.2	---	---	.52
22	--	---	.46	37.7	60.4	---	---	1.9	.45
24	--	---	.53	45.9	52.5	1.6	---	---	.52
26	2.5	---	.39	51.1	48.9	---	---	---	.38
28	--	---	.34	60.0	40.0	---	---	---	.34
30	--	---	.18	52.4	47.6	---	---	---	.18
32	--	---	.22	77.0	23.0	---	---	---	.22
34	--	---	.14	88.2	11.8	---	---	---	.14
36	--	---	.08	77.8	22.2	---	---	---	.08
38	--	---	.03	100.0	----	---	---	---	.03
40	--	---	.02	100.0	----	---	---	---	.02
Over	--	---	.03	100.0	----	---	---	---	.03
Total	0.2	0.5	6.43	34.9	58.5	5.1	1.0	0.5	6.22
Total by Volume	0.1	0.-	Bd. Ft. 2450	60.9	33.7	1.2	0.1	0.1	Bd. Ft. 2410

°This total excludes any trees which have died since logging, (see Table 9), and trees so defective that it is clearly evident that no increment can be expected from the, (see last column Table 2).

TABLE NO. 5. GROWTH OF YELLOW PINE IN RESERVED STAND BEFORE CUTTING L.L.& B. CO., SALE 11-16-17.

SITE IV. MATURE HTS. 120-125'.

D.B.H.	BASIS: NO. OF TREES	AGE INTERVAL (BEFORE) CUTTING (n)	VOLUME AVERAGE (V. v) TREE IN BD.FT.	GROWTH (V - v)/(V + v)	% PRESENT 200/n
4	--	--	--	----	
6	18	16	--	----	
8	18	14	--	----	
10	15	18	--	----	
12	18	18	30	----	
14	26	15	46	2.81	
16	25	14	96	5.03	
18	11	15	140	2.20	
20	17	17	210	2.35	
22	19	20	320	2.08	
24	16	18	422	1.53	
26	22	24	630	1.64	
28	15	21	858	1.44	
30	10	23	1133	1.20	
32	12	19	1446	1.28	
34	3	24	1770	0.83	
36	4	18	2080	0.90	
38	2	19	2353	0.65	
40	2	25	2780	0.66	

TABLE NO. 6. RESERVED STAND LEFT BEFORE AND AFTER CHANGE IN MARKING PRACTICE.

D.B.H.	NUMBER OF TREES PER ACRE: MARKING PRIOR TO 1921: BASIS 146.4 ACRES OF STRIP. SECS. 17, 18 & 8, T. 29 N., R. 9 E.		MARKING SUBSEQUENT TO 1921 BASIS 118.4 ACRES OF STRIP. SECS. 5,6,29 & 32 T.30 N., R. 9 E.	
12	1.28		1.07	
14	1.49		.90	
16	1.30		.74	
18	.86		.74	
20	.66		.53	
22	.59		.46	
24	.67		.53	
26	.55	7.40	.38	5.35
28	.27		.34	
30	.18		.18	
32	.06		.22	
34	.05		.14	
36	.007		.08	
38	.006		.03	
40	----		.02	
Over 40	----	.59	.03	1.04
Total		7.99		6.39
Vol.	1950 Bd. Ft.		2450 Bd. Ft.	

TABLE NO. 7. DAMAGE IN LOGGING.

SPECIES - YELLOW PINE. BASIS 0-3" D.B.H. 11.7 ACRES PLOTS
4"+ D.B.H. 118.4 ACRES STRIP

SIZE IN HEIGHT OR D. B. H.	NO. OF TREES OR VOL. IN BD. FT.	TOTAL STAND LEFT	STEM INJURIES NO.	STEM INJURIES %	BROKEN TOPS NO.	BROKEN TOPS %
4-11"	No.	1428	6	0.4	7	0.5
12" +	No.	757.4	16	2.1	7	0.9
12" +	Vol.	289,859	4720	1.6	430	0.1+

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TABLE NO. 8. DAMAGE IN BRUSH BURNING

SPECIES - YELLOW PINE. BASIS 0-3" D.B.H. 11.7 ACRES PLOTS
SITE IV. 4"+ D.B.H. 118.4 ACRES STRIP

SIZE IN HEIGHT OR D. B. H.	NO. OF TREES OR VOL. IN BD.FT.	TOTAL STAND LEFT	KILLED NO.	KILLED PER CENT
0-6'	No.	2231	286	13
6-3"	No.	145	15	10
4-11"	No.	1428	25	1.8
12"+	No.	757.4	1	0.1+
12"+	Vol.	289,859	30	0.0+

TABLE NO. 9. LOSSES IN RESERVED STAND SUBSEQUENT TO LOGGING AND BRUSH DISPOSAL ON 1184 ACRES.

(Basis 100% cruise of dead trees and 10% cruise of living trees.)

D.B.H.	KILLED BY: LIGHTNING	KILLED BY: INSECTS	WINDFALL	TOTAL	TOTAL RESERVED STAND
12	--	--	--	--	1269
14	--	--	--	--	1070
16	--	1	--	1	881
18	1	--	--	1	881
20	--	--	--	--	630
22	--	--	1	1	541
24	--	--	--	--	630
26	--	--	--	--	450
28	2	2	1	5	405
30	--	--	--	--	210
32	1	--	1	2	262
34	1	--	--	1	171
36	--	--	1	1	91
38	--	--	--	--	30
40	--	--	--	--	20
Over	1	--	1	2	32
Total Number	6	3	5	14	7573